

CLAIM AMENDMENT

1. (Original) A telemetry digital data communication system comprising:
 - a central data acquisition system;
 - a first telemetry device that utilizes a modem for data communication, and
 - a second telemetry device;
 - a two-wire data transmission line between the first telemetry device and the second telemetry device;
 - wherein the second telemetry device comprises:
 - a processor for communicating with the first telemetry device;
 - a modem for facilitating the processor to communicate the digital meter data from the first telemetry device to the digital cellular radio;
 - a ring voltage generator for enabling communication with the first telemetry device;
 - a loop current generator to maintain current flow through the two-wire line when the second telemetry device communicates with the first telemetry device;
 - an off-hook detector to determine whether the first telemetry device is in an off-hook condition;
 - a dial tone generator to generate a dial tone to the first telemetry device;
 - a dual tone multi-frequency (DTMF) digit detector to determine whether a DTMF digit was transmitted by the first telemetry device; and
 - a digital cellular radio for communicating with the processor and the central data acquisition system;
 - wherein the processor facilitates relaying digital meter data from the first telemetry device to the digital cellular radio in which the digital cellular radio facilitates transmitting the digital meter data to the central data acquisition system;
 - wherein the digital cellular radio is capable of receiving instruction data from the central data acquisition system to transmit digital meter data from the first telemetry device, and sending the instruction data to the

processor for relaying the instruction data and communicating with the first telemetry device over the data communication line to transmit the digital meter data from the first telemetry device which then transmits the data to the central data acquisition system.

2 to 6 (Canceled)

7. (Currently amended) ~~The system as defined in claim 4, wherein the second telemetry device further comprises:~~

A telemetry digital data communication system comprising:

a central data acquisition system;

at least one first telemetry device that utilizes a modem for data communication;

a second telemetry device for at least one first telemetry device comprising:

a processor for communicating with the first telemetry device;

a digital cellular radio for communicating with the processor and the central data acquisition system;

a ring voltage generator for enabling communication with the first telemetry device;

a loop current generator to maintain current flow through the two-wire data transmission line when the second telemetry device communicates with the first telemetry device; and

an off-hook detector to determine whether the first telemetry device is in an off-hook condition;

a two-wire communications line between the first telemetry device and processor

wherein the processor relays digital meter data from the first telemetry device to the digital cellular radio in which the digital cellular radio facilitates transmitting the digital meter data to the central data acquisition system.

8 to 13 (Canceled)

14. (Currently amended) ~~The system as defined in claim 9, wherein the second telemetry device further comprises:~~

A data generation and acquisition system comprising:

a central data acquisition system;

at least one first telemetry device; and

a second telemetry device for at least one first telemetry device comprising:

a processor for communicating with the first telemetry device, and

a digital cellular radio for communicating with the processor and the central data acquisition system;

a ring voltage generator for enabling communication with the first telemetry device;

a loop current generator to maintain current flow through the two-wire communications line when the remote telemetry device communicates with the first telemetry device; and

an off-hook detector to determine whether the first telemetry device line is in an off-hook condition-;

wherein the digital cellular radio receives instruction data from the central data acquisition system to transmit digital meter data from the first telemetry device, the digital cellular radio sends the instruction data to the processor, wherein the processor relays the instruction data and communicates with the first telemetry device over the data communication line to transmit the digital meter data from the first telemetry device which then transmits the data to the central data acquisition system.

15. (Canceled)

16. (Currently amended) A remote telemetry device for facilitating digital communication between a modem equipped meter and a central data acquisition system, the remote telemetry device comprising:

a processor for communicating with the modem of the meter;

a digital cellular radio for communicating with the processor and the central data acquisition device;

a two-wire communications line between the modem equipped meter and processor;

a modem for facilitating the processor to communicate the digital meter data from the modem equipped meter to the cellular radio;

a ring voltage generator for enabling communication with the modem equipped meter;

a loop current generator to maintain current flow through the two-wire data transmission line when the remote telemetry device communicates with the modem equipped meter;

an off-hook detector to determine whether the modem equipped meter is in an off-hook condition;

a dial tone generator to generate a dial tone to the modem equipped meter; and

a dual tone multi-frequency (DTMF) digit detector to determine whether a DTMF digit was transmitted by the modem equipped meter;

wherein the processor relays the digital meter data from the modem of the meter to the cellular radio in which the digital cellular radio facilitates transmitting the digital meter data to the central data acquisition system;

wherein the cellular radio receives instruction data from the central data acquisition system to transmit the digital meter data from the modem equipped meter, the cellular radio sending the instruction data to the processor, wherein the processor relays the instruction data and communicates with the modem equipped meter to transmit the digital meter data from the modem equipped meter.[[.]]

17 to 20 (Canceled)

21. (Currently amended) ~~The device as defined in claim 18, further comprising:~~

A remote telemetry device for facilitating digital communication between a modem equipped meter and a central data acquisition system, the remote telemetry device comprising:

a processor for communicating with the modem of the meter; and

a digital cellular radio for communicating with the processor and the central data acquisition device;

a ring voltage generator for enabling communication with the modem equipped meter;

a two-wire data transmission line between the modem equipped meter and processor;

a loop current generator to maintain current flow through the two-wire data transmission line when the remote telemetry device communicates with the modem equipped meter; and

an off-hook detector to determine whether the modem equipped meter is in an off-hook condition-;

wherein the processor relays the digital meter data from the modem of the meter to the cellular radio in which the digital cellular radio facilitates transmitting the digital meter data to the central data acquisition system.

22 to 26 (Canceled)

27. (Currently amended) ~~The device as defined in claim 24, further comprising:~~
A remote telemetry device for facilitating digital communication between a modem equipped meter and a central data acquisition system, the remote telemetry device comprising:

a processor for communicating with the modem of the meter; and

a cellular radio for communicating with the processor;

a ring voltage generator for enabling communication with the modem equipped meter;

a two-wire data transmission line between the modem equipped meter and processor;

a loop current generator to maintain current flow through the two-wire line when the remote telemetry device communicates with the modem equipped meter;
and

an off-hook detector to determine whether the modem equipped meter is in an off-hook condition-;

wherein the cellular radio receives instruction data from the central data acquisition system to transmit the digital meter data from the modem equipped meter, the cellular radio sending the instruction data to the processor, wherein the processor relays the instruction data and communicates with the modem equipped meter to transmit the digital meter data from the modem equipped meter.

28. (Canceled)

29. (Original) A method for facilitating digital communication between a modem equipped meter and a central data acquisition system, the method comprising the steps of:

- detecting incoming calls from the central data acquisition system;
- generating ring voltage to the modem equipped meter;
- generating a dial tone to the modem equipped device;
- detecting whether the modem equipped meter is off hook;
- detecting dual tone multi frequency (DTMF) from the modem equipped meter;
- dialing a digital cellular radio for communicating with the central data acquisition system;
- receiving instruction data from the central data acquisition system for transmitting data from the modem equipped meter;
- establishing a bi-directional communication pathway that relays data between the modem equipped meter and the central data acquisition system, and terminating the pathway.

30 to 34 (Canceled)

35. (Currently amended) ~~The method as defined in claim 30, further comprising:~~

A method for facilitating digital communication between a modem equipped meter and a central data acquisition system, the method comprising the steps of:

- detecting whether the modem equipped meter is off hook;
- establishing a bi-directional communication pathway that relays data between the modem equipped meter and the central data acquisition system;
- detecting incoming calls from the central data acquisition system;
- generating ring voltage to the modem equipped meter; ~~and~~
- causing a digital cellular radio to answer the incoming calls; and
- terminating the pathway.

36. (Canceled)